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1 Routine/Function Prologues

1.0.1 clm2_singleout.F90 (Source File: clm2_singleout.F90)

Write output file for a single CLM variable

REVISION HISTORY:

14 Jun 2002; Sujay Kumar Initial Specification

INTERFACE:

```
subroutine clm2_singleout (var_array, index)
```

USES:

```
use lisdrv_module, only : lis, tile
use clm_varcon, ONLY : denh2o, denice, hvap, hsub, hfus, istwet
use clm_varpar, ONLY : nlevsoi
use clm_varmap, ONLY : patchvec
use clm_varctl, only : clmdrv
use drv_output_mod, only : t2gr
```

CONTENTS:

```
!-----
! Test to see if output writing interval has been reached
!-----
if(mod(lis%t%gmt,clmdrv%writeintc2).eq.0)then
!-----
! Generate directory structure and file names for CLM Output
!-----
length = len(trim(vname1(index)))
WRITE(UNIT=temp, FMT='(A12)') VNAME1(index)
READ(UNIT=temp,FMT='(12A1)') (FVARNAME(I), I=1,length)
WRITE(unit=temp,fmt='(I4,I2,I2)')lis%T%YR,lis%T%MO,lis%T%DA
READ(unit=temp,fmt='(8a1)')FTIME
DO I=1,8
    IF(FTIME(I).EQ.(' '))FTIME(I)='0'
ENDDO

WRITE(unit=temp,fmt='(I4)')lis%T%YR
READ(unit=temp,fmt='(8a1)')FTIMEC
DO I=1,4
    IF(FTIMEC(I).EQ.(' '))FTIMEC(I)='0'
ENDDO

#if 0
WRITE(unit=temp,fmt='(a6,i3,a1)')'/LIS.E',lis%0%EXPCODE,'.
READ(unit=temp,fmt='(80a1)') (FNAME(I),I=1,10)
DO I=1,10
```

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        IF(FNAME(I).EQ.( ' ))FNAME(I)='0'
    ENDDO
#endiff

    idisk = mod(index, lis%o%odirn)
    if ( idisk == 0 ) then
        idisk = lis%o%odirn
    endif
    WRITE(unit=temp,fmt='(a40)' lis%O%ODIR_ARRAY(idisk)
    READ(unit=temp,fmt='(40a1)' ) (FBASE(I),I=1,40)
    C=0
    DO I=1,40
        IF(FBASE(I).EQ.( ' ) .AND.C.EQ.0)C=I-1
    ENDDO

    WRITE(unit=temp,fmt='(A4,I3,A6,I4,A1,I4,I2,I2)' )'/EXP', &
        lis%O%EXPCODE,'/CLM2/, &
        lis%t%YR,'/ ',lis%T%YR,lis%T%MO,lis%T%DA
    READ(unit=temp,fmt='(80A1)' ) (FYRMODIR(I),I=1,26)
    DO I=1,26
        IF(FYRMODIR(I).EQ.( ' ))FYRMODIR(I)='0'
    ENDDO

    WRITE(unit=temp,fmt='(A9)' )'mkdir -p '
    READ(unit=temp,fmt='(80A1)' )(FMKDIR(I),I=1,9)

    WRITE(unit=temp,fmt='(80A1)' )(FMKDIR(I),I=1,9),(FBASE(I),I=1,C), &
        (FYRMODIR(I),I=1,26)
    READ(unit=temp,fmt='(A80)' )MKFYRMO

!-----
! Make the directories for the CLM2 output files
!-----
    call system(mkfyrmo)
#ifndef ABSOFT
    call perror("ERR: clm2_singleout --")
#endif

!-----
! Generate file name for binary output
!-----
    if(lis%o%wout.eq.1)then
        write(unit=temp,fmt='(I4,I2,I2,I2)' )lis%t%yr, &
            lis%t%mo,lis%t%da,lis%t%hr
        read(unit=temp,fmt='(10A1)' )ftimeb
        do i=1,10
            if(ftimeb(i).eq.( ' ))then
                ftimeb(i)='0'

```

```

        endif
    enddo

    !write(unit=temp,fmt='(A9)')' .CLM2gbin'
    if ( lis%d%domain == 8 ) then
        write(unit=temp,fmt='(A5)')' .gd4r'
        read(unit=temp,fmt='(80A1)') (fsubgb(i),i=1,5)
    else
        write(unit=temp,fmt='(A5)')' .ls4r'
        read(unit=temp,fmt='(80A1)') (fsubgb(i),i=1,5)
    endif

#ifndef 0
    write(unit=temp,fmt='(82A1)')(fbase(i),i=1,c), &
        (FYRMODIR(I),I=1,26), &
        (fname(i),i=1,10),(ftimeb(i),i=1,10), &
        (fvarname(i),i=1,length),(fsubgb(i),i=1,9 )
    read(unit=temp,fmt='(A82)')filengb
#endif
    write(unit=temp,fmt='(69A1)')(fbase(i),i=1,c), &
        (FYRMODIR(I),I=1,26), '/ , &
        (ftimeb(i),i=1,10), &
        (fvarname(i),i=1,length),(fsubgb(i),i=1,5 )
    read(unit=temp,fmt='(A69)')filengb
endif
if(lis%o%wout.eq.1)then
    clmdrv%numoutc2=clmdrv%numoutc2+1
    if ( lis%d%domain == 8 ) then ! special 1km regional domain
        allocate(g2tmp(lis%d%lnc,lis%d%lnr))
        g2tmp = lis%d%UDEF
        do i = 1, lis%d%glbnch
            g2tmp(tile(i)%col, tile(i)%row) = var_array(i)
        enddo

        if ( lis%o%odirn == 1 ) then
            open(58,file=filengb,form='unformatted',access='direct', &
                recl=lis%d%lnc * lis%d%lnr * 4)
            write(58, rec=1) g2tmp
        else !*** multi disk output
            open(58,file=filengb,form='unformatted',access='direct', &
                recl=lis%d%lnc*4)
            do i = 1, lis%d%lnr
                nrec = (lis%d%ir-1) * lis%d%lnr * 50 + ( i - 1 ) * 50 + lis%d%ic
                write(58,rec=nrec) g2tmp(:,i)
            enddo
        endif
        deallocate(g2tmp)
    else
        ! all other domains

```

```

open(57,file=filengb,form='unformatted')
allocate(gttmp(lis%d%glbngrid))
call t2gr(var_array,gttmp,lis%d%glbngrid,lis%d%glbnch,tile)
write(57) gttmp
deallocate(gttmp)
endif
!-----
! Write statistical output
!-----
if ( lis%d%domain == 8 ) then ! special 1km regional domain
  call lis_log_msg("DBG: clm2_singleout -- domain 8 cannot write // &
                    "stats file")
else
  if(clmdrv%clm2open.eq.0)then
    file='CLMstats.dat'
    call openfile(name,lis%o%odir,lis%o%expcode,file)
    if(lis%o%startcode.eq.1)then
      open(60,file=name,form='formatted',status='unknown', &
            position='append')
    else
      open(60,file=name,form='formatted',status='replace')
    endif
    clmdrv%clm2open=1
  endif
  write(60,996)'      Statistical Summary of CLM Output for: ', &
                lis%t%mo,'/',lis%t%da,'/',lis%t%yr,lis%t%hr,:', &
                lis%t%mn,:',lis%t%ss

996  format(a47,i2,a1,i2,a1,i4,1x,i2,a1,i2,a1,i2)
997  format(t26,'Mean',t40,'StDev',t54,'Min',t68,'Max')

  call stats(var_array,lis%d%udef,lis%d%glbnch,vmean,vstdev,vmin, &
             vmax)
  write(60,999) vname(index),vmean,vstdev,vmin,vmax
endif
endif
endif
995 format (1x,a10,I1,a9,4f14.3)
999 format (1x,a15,4f14.3)
998 format (1x,a15,4e14.3)

```